

REMARKS

The Applicants have carefully reviewed the Office Action of April 9, 2002, and in response amend claims 1 and 9 so as to address the formal issues and remove the basis for rejection of these claims under 35 U.S.C. §112, second paragraph. More particularly, claim 1 now consistently refers to the first facing material layer. Claim 9 has been amended to clearly refer to heat sources and/or sound sources: that is, heat and sound sources individually and in combination. Based upon these amendments, the rejection of claims 1 and 9 under 35 U.S.C. §112 should be withdrawn.

Turning now to the substantive issues, claim 1 has also been amended to incorporate the subject matter of claim 8 which is now canceled without prejudice. Amended claim 1 as well as claims 2, 6, 9, 10, 12 and 14-17 dependent thereon very clearly patentably distinguish over U.S. Patent 6,093,481 to Lynn et al. when considered in combination with U.S. Patent 4,985,106 to Nelson.

Claim 1 reads upon an acoustical and thermal insulator comprising a multilayer composite including (a) a first facing material layer, (b) a polymer based blanket layer, and (c) an insulation insert encapsulated by the first facing material layer and the polymer based blanket layer. That insulation insert is constructed from fiberglass, foam, polymer based blanket material, natural fiber based blanket material and combinations thereof.

The primary reference to Lynn et al. relates to insulating sheeting including various laminate configurations shown in Figures 1-4. Significantly, and as noted by the Examiner, the Lynn et al. reference does not teach or suggest in any manner the provision of an insulation insert of any material encapsulated in the first facing material layer and polymer based blanket layer as set forth and claimed in claim 1 of the present application.

In an effort to rectify this shortcoming of the primary reference to Lynn et al., the

Examiner cites the Nelson patent. The Nelson patent relates to various constructions for insulation panels used in appliances to reduce noise, vibration and heat. In the embodiment shown in Figure 3 of the Nelson patent, a vibration barrier insert or pad 48 is encapsulated in the insulation material which is likewise enclosed or encapsulated between top and bottom cover sheets 41, 42. As set forth at column 9, lines 12-17, the insert or pad 48 is constructed from "loaded vinyl, loaded asphalt, or asphalt impregnated felt." The insulation material 43a, 43b is identified at column 6 lines 17-21 as "non-interengaged fiberglass, mineral wool, cellulose, ceramic fiber, beans of plastic foam, particles of lead and the like." The cover sheets 41, 42 are made from polyethylene, PVC or polypropylene (see col. 8, lines 45-47).

The Nelson patent also discloses the concept of encapsulating a precut mat 68 of fiberglass between two sheets of polymer film (see Figure 5b and the text of the Nelson patent at column 10 lines 10-46).

Finally, the Nelson patent also discloses the concept of encapsulating a vibration barrier pad 70 which may be located on top of insulation 23 or directly against the bottom sheet 22 between the bottom 22 and the insulation 23. In accordance with the teachings of the Nelson patent such a vibration pad 70 is formed from loaded vinyl, loaded asphalt and asphalt impregnated felt.

The vibration barrier or pad of the Figure 3 and 6 embodiments of the Nelson patent is explicitly disclosed as being made of "loaded vinyl, loaded asphalt and asphalt impregnated felt". This totally differs from the insulation insert of the present invention as set forth in claim 1 which is selected from a group of materials consisting of fiberglass, foam, polymer based blanket material, natural fiber based blanket material and combinations thereof. Accordingly, the Figure 3 and 6 embodiments of the Nelson patent provide no teaching whatsoever relevant to the present invention. When this is considered in combination with the fact that the primary reference to Lynn et al. fails to provide any teaching or suggestion relating to the provision of any form of insert, it is

very clear that there is no sound basis for the rejection of amended claim 1.

Further, while the Figure 5b embodiment includes an insert 68 of fiberglass, it must be appreciated that the Nelson patent only teaches encapsulating that fiberglass between two layers 21, 22 of polymer film material. Accordingly, at best, one skilled in the art reviewing the Figure 5b embodiment of the Nelson patent would only have it suggested to him to provide an insulation insert of fiberglass between two polymer film layers. Such a construction totally differs from that set forth and claimed in claim 1 of the present application wherein the insulation insert is encapsulated by a first facing material layer and a polymer based blanket layer. Accordingly, it is clear that claim 1 should be formally allowed.

Stated another way, in order to support the conclusion that the invention set forth in claim 1 is directed to obvious subject matter, either the Lynn et al. and the Nelson references must expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. As noted above, the references when considered in combination do not expressly or impliedly teach or suggest the structure set forth in claim 1. Further, the Examiner has presented no basis or argument to indicate why an artisan would have found it obvious to selectively pick and choose from the various elements and concepts of the two cited references in order to arrive at the claimed invention without using the present invention as a guide. It is well established that simplicity and hindsight are not proper criteria for resolving the issue of obviousness and, accordingly, it is therefore clear that claim 1 should be formally allowed. See *Ex Parte Clapp*, 227 USPQ 972 (Board of Patent Appeals and Interferences, 1985).

Claims 2, 6, 9-10, 12 and 14-17 which depend from claim 1 and are rejected on the same grounds are equally allowable for the same reasons. Further, these claims include additional limitations to support their allowability. For example, claim 2 provides that the

first facing layer is constructed from a heat reflective metallic foil having a thickness of between substantially 0.5-5.0 mil. While the Lynn et al. patent refers to metallic foils, it does not disclose an insulation insert encapsulated by a foil and a polymer based blanket layer as claimed. Further, while the Nelson patent teaches encapsulation of an insulation insert, such an insert is encapsulated by polymer films not metallic foils. Accordingly, there is no basis in the cited and applied art for rejecting claim 2.

Claims 3-5 very clearly patentably distinguish over a combination of the Lynn et al. and Nelson patents cited above even when considered in combination with U.S. Patent 4,438,166 to Gluck et al. In accordance with the Examiner's comments, the Gluck et al. patent is cited for its disclosure of a metallic foil reinforced with a fibrous scrim, a fibrous mat or a fibrous web consisting of glass fiber threads in a criss-cross pattern. The Gluck patent, however, fails in any manner to address the shortcoming noted above in the teachings of the primary reference to Lynn et al. and the secondary reference to Nelson which prevent that combination from forming a valid basis for the rejection of claim 1 from which claims 3-5 depend. Simply stated, even when considered in combination the cited and applied references fail to teach or suggest the claimed invention. The references simply do not lead one skilled in the art to provide an insulation insert of the material claimed encapsulated by a first facing material layer and a polymer based blanket layer. Accordingly, claims 3-5 patentably distinguish over the prior art and should be formally allowed.

Claim 7 clearly patentably distinguishes over the Lynn et al. and Nelson patents when considered in combination with U.S. Patent 5,366,678 to Nomizo et al. In accordance with the Examiner's comments, the Nomizo et al. patent is cited for its disclosure of a compression molding process to control the density and hardness of specific regions of a product, in this case a seat cushion. The Nomizo et al. patent, like the Gluck et al. patent does not incorporate any form of insulation insert and, accordingly, it cannot provide the teachings missing from the Lynn et al. and Nelson patents noted

above. Accordingly, this combination of references also fails to provide any appropriate basis for the rejection of claim 7. The combination of references simply does not teach or suggest the encapsulation of an insulation insert by a first facing material layer and a polymer based blanket layer as claimed. Thus, claim 7 should be allowed.

Finally, claims 11 and 13 are clearly patentable over the Lynn et al. and Nelson patents when considered in combination with U.S. Patent 6,096,416 to Altenberg. As set forth in the Office Action, the Altenberg patent is cited for its disclosure of a facing layer including a scrim in an insulating panel for the purpose of providing improved mechanical properties and flame resistance. The Altenberg patent does not include any form of encapsulated insulation insert. Accordingly, the Altenberg patent does not address the shortcomings noted above with respect to the combination of the Lynn et al. and Nelson patents. Thus, this proposed combination of references does not teach or suggest the provision of an acoustical or thermal insulator having an insulation insert encapsulated by a first facing material layer and a polymer based blanket layer as claimed. Thus, the combination of references does not provide a proper basis for the rejection of claims 11 and 13 under 35 USC § 103. Accordingly, these claims should be allowed.

In summary, all the pending claims patentably distinguish over the art and should be allowed. Upon careful review and consideration it is believed the Examiner will agree with this proposition. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited. If any fees are required pertaining to this response, the Applicants request that they be charged to Deposit Account No. 50-0568.

Respectfully submitted,

OWENS CORNING



Stephen W. Barns

Reg. No. 38,037

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Owens Corning
Patent Dept., Bldg. 54
2790 Columbus Road
Granville, Ohio 43023
(740) 321-7162

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Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application :
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 PAUL WARREN POOLE ET AL. :
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 Ser. No. 09/607,481 :Examiner: Miggins, Michael C.
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 Filed: June 30, 2000 :Group Art Unit: 1772
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 For: ACOUSTICAL AND THERMAL INSULATOR

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. An acoustical and thermal insulator, comprising a multilayer composite including (a) a first facing material layer, (b) a polymer based blanket layer and (c) an insulation insert encapsulated by said first facing [heat reflective] material layer and said polymer based blanket layer said insulation insert being constructed from a material selected from a group consisting of fiberglass, foam, polymer based blanket material, natural fiber based blanket material and combinations thereof.

9. The insulator of Claim 1, wherein said insulation insert is positioned only at selected locations in said insulators to provide shielding of heat sources and/or [heat/] sound sources.